

*Resistivity*

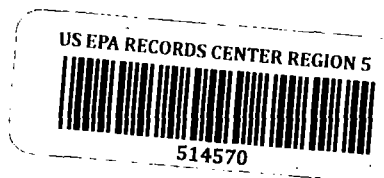
*June 2/2/82*



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
OFFICE OF RESEARCH AND DEVELOPMENT

FEB. 1 8 1982

Our Reference: AMI



ENVIRONMENTAL MONITORING  
SYSTEMS LABORATORY  
P.O. BOX 18000  
LAS VEGAS, NEVADA 89118  
702/785-2100 (FTL 441-2100)

To Whom It May Concern:

A contract to assess the utility of the complex resistivity method in detecting groundwater contamination has been negotiated with the Environmental Monitoring Systems Laboratory. A number of candidate hazardous waste and injection well sites are needed to assess whether this geophysical monitoring method will help define the magnitude and extent of underground contamination at those sites. The Laboratory desires to begin field tests of the method this summer at a hazardous waste site. Your assistance is sought in obtaining a site where this promising method can be researched.

A list of factors which must be considered in the selection of that site follows. If you know of sites which meet the listed criteria, I would appreciate you completing the attached form for each proposed site.

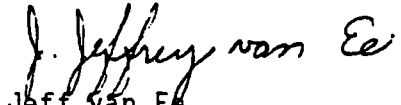
- 1) Legal: The site should be free of legal entanglements with no litigation anticipated in the foreseeable future. The use of complex resistivity can be characterized as a research effort. It is not now considered to be a proven method of providing evidence of chemical contamination.
- 2) Accessibility: The site should be open to EPA and contractor personnel.
- 3) Cultural Interferences: The area should be free of electrical powerlines and extensive amounts of metal. Metal fencing, should be located some distance away from suspected areas of contamination.
- 4) Geological Characteristics: The underground structure should be uniform in composition. The water table should not rise to the surface in the area to be surveyed.
- 5) Contaminant Characteristics: The suspected contaminants should be electrically conductive, but this is not absolutely essential.
- 6) Existing Data: Previous studies of the geology and contamination are highly desirable. In situ measurements at selected points will serve as a benchmark for the complex resistivity data. The in situ data should be current. This data needs to be kept confidential until after the contractor has completed the complex resistivity survey and presents a report to EPA.

The detailed information requested in the form is vital to the selection of the first test site. I ask that you return the forms to me as soon as possible.

*545 - 2367*

If I can be of any further assistance, please call me at FTS 545-2367.

Sincerely yours,

A handwritten signature in cursive script that reads "J. Jeffrey van Ee".

Jeff van Ee  
Integrated Monitoring Systems Branch  
Advanced Monitoring Systems Division

Enclosure

GEOPHYSICAL MONITORING SITE SURVEY FORM

Background Information

Site Name: \_\_\_\_\_

Location: Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_

Nearest Municipality: \_\_\_\_\_ State: \_\_\_\_\_

Is this: a Superfund site? \_\_\_\_\_

a landfill site? \_\_\_\_\_

a chemical disposal site? \_\_\_\_\_

a research site? \_\_\_\_\_

Name of organization and individual to contact for further information: \_\_\_\_\_

Telephone: \_\_\_\_\_

Who is responsible for access to the site? \_\_\_\_\_

Telephone: \_\_\_\_\_

Do photographs exist of the Site? \_\_\_\_\_

If photographs of the site cannot be provided at this time, where may photographs be obtained? Name: \_\_\_\_\_

Address: \_\_\_\_\_

What type of photographs? Slides: \_\_\_\_\_

Prints: \_\_\_\_\_

Aerial Photos: \_\_\_\_\_

Other: \_\_\_\_\_

If photographs can be attached, is it necessary to return them? \_\_\_\_\_

To whom? \_\_\_\_\_

What activities are presently occurring at the sites? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Will the site be involved in clean-up efforts in the foreseeable future? \_\_\_\_\_

When? \_\_\_\_\_

### Contaminant Characteristics

What contaminants are known to exist at the site? What are the concentrations?

\_\_\_\_\_  
\_\_\_\_\_

What contaminants are believed to exist at the site? What are the concentrations?

\_\_\_\_\_  
\_\_\_\_\_

Where (horizontally) are the contaminants known to exist? \_\_\_\_\_  
(Attach a map, sketch, or report on the site if possible)

If there is information which identifies where contamination exists, where can the materials be obtained? \_\_\_\_\_

Are the contaminants present on the surface of the site? \_\_\_\_\_

Do the contaminants present a safety hazard to the person who would walk on the site without protective clothing? \_\_\_\_\_

### Site Characteristics

#### Surface Characteristics

Is there anything on the surface of the site which would present difficulties to geophysical monitoring? \_\_\_\_\_

Drums? \_\_\_\_\_

Uneven terrain? \_\_\_\_\_

Pavement? \_\_\_\_\_

Ditches or trenches? \_\_\_\_\_

Structures? \_\_\_\_\_

Metal debris or metal fences? \_\_\_\_\_

Any fences which subdivide the site? \_\_\_\_\_

Metal fences on the perimeter of the site? \_\_\_\_\_

Powerlines? \_\_\_\_\_

Nearby radio transmitters? \_\_\_\_\_

Dense forest? \_\_\_\_\_

Seep (springs), ponds, bogs? \_\_\_\_\_

(Attach maps, reports, or sketches to indicate where significant surface features are located)

#### Subsurface Characteristics

Are the geological characteristics of the site well defined and understood?

(Attach maps, sketches, and reports if available) \_\_\_\_\_

What is the depth to the water table? \_\_\_\_\_

Are the hydrogeological characteristics known? \_\_\_\_\_

(Attach maps, sketches, and reports if available)

Are nonmetallic buried objects or voids known to exist at the site? \_\_\_\_\_

What are they? \_\_\_\_\_

Where are they? (Attach maps, sketches, or reports if readily available;

otherwise, indicate where they may be obtained) \_\_\_\_\_

Are buried metal objects (such as drums, wire, pipelines) known to exist at the site? \_\_\_\_\_

What are they? \_\_\_\_\_

Where are they? \_\_\_\_\_

(Attach maps, sketches, or reports if readily available; otherwise, indicate where they can be obtained)

Are metal cased monitoring wells located on site? If so, where? (Attach maps, sketches, or reports if readily available; otherwise, indicate where they may be obtained) \_\_\_\_\_

What is the quality of the uncontaminated groundwater (with emphasis given to TDS and conductivity)? \_\_\_\_\_

Past and Present Studies (Conventional and Geophysical)

When was the site studied?

<u>Dates</u>	<u>Investigator</u>	<u>Type of Study</u> (Geophysical, monitoring wells)	<u>Where can the</u> <u>results be found?</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Where are the monitoring wells located and at what depth? (Attach maps, sketches, or reports for reference) \_\_\_\_\_

What materials were used for the wells? \_\_\_\_\_

What, if any, geophysical methods were used at the site? \_\_\_\_\_

Are groundwater samples being collected at the site for analysis? \_\_\_\_\_

If yes, can samples be made available for testing by a geophysical contractor (contracted to EMSL-Las Vegas)? \_\_\_\_\_

Can core samples be made available for testing by the geophysical contractor? \_\_\_\_\_

Which documents do you want returned? \_\_\_\_\_

To whom? \_\_\_\_\_

Is there other information you wish to bring to our attention? \_\_\_\_\_

Please return this form and all supporting documents to:

Name:

Address: